REMARKS/ARGUMENTS

Favorable reconsideration of this application, as presently amended and in light of the following discussion, is respectfully requested.

Claims 1-11 are pending in this case. Claims 1 and 4-6 are amended and Claims 9-11 are added by the present amendment. The clarifying amendments to Claims 1 and 4-6 and the addition of Claims 9-11 are supported in the originally filed disclosure at least at original Claim 4, Figures 1 and 2, and at paragraphs [0056], [0081], and [0082] of the published Specification. Thus, no new matter is added.

In the outstanding Office Action, Claim 6 was rejected under 35 U.S.C. § 103(a) as unpatentable over Winther, et al. (U.S. Pub. No. 2002/0141382, herein "Winther") in view of Benayoun, et al. (U.S. Patent No. 6,950,429, herein "Benayoun"); Claims 1, 3-5, 7, and 8 were rejected under 35 U.S.C. § 103(a) as unpatentable over Winther in view of Benayoun, further in view of Beshai, et al. (U.S. Pub. No. 2002/0131363, herein "Beshai"); and Claim 2 was rejected under 35 U.S.C. § 103(a) as unpatentable over Winther in view of Benayoun and Beshai, further in view of Colley, et al. (U.S. Patent No. 6,650,644, herein "Colley").

At the outset, Applicants and Applicants' representative thank Examiner Phung for the courtesy of an interview with Applicants' representative on August 18, 2009. The discussion during that interview is reflected in the remarks presented herein.

Applicants respectfully traverse the rejections of the pending claims.

Response to Rejection of Claim 6

The outstanding Office Action asserts the precedence field 138 of Winther as teaching "first bits for implementing bandwidth control," as recited by Claim 6, and asserts Benayoun as modifying the TOS field 140 of Winther to teach "second bits that indicate a path for routing," as recited by Claim 6.

Claim 6 is amended to recite a **router comprising** "a **bit-setting information-obtaining unit configured <u>to obtain</u>** first bits and **second bits <u>from a QoS controller</u>**; and a control and relay unit configured to control and route at said router in accordance with said first bits for implementing bandwidth control at said router stored in a first area assigned within an IP-header field of an IP packet, and **said second bits** that **indicate a path for routing the IP packet to a destination router** at said router stored in a second area also assigned within said IP-header field of the IP packet, wherein said first bits and said second bits do not interfere with each other within said IP-header field of the IP packet."

<u>Winther</u> describes, at paragraphs [0057] to [0060], a router 108 of a subscriber node 26 managing bandwidth allocation through provision of varying levels of throughput and transmission priority of IP data packets 122. The **router 108 sets and alters the type of service** octet 134 itself.

<u>Benayoun</u> describes, at column 3, line 34, to column 4, line 49, that an **IP datagram with** a header 24 including a service type field 28 with Type of Service bits is received at an ingress node 16. As stated at column 4, lines 2-4, of <u>Benayoun</u>, "the **TOS bits are previously all zeros**" when **received by the ingress node**. Emphasis added. As stated at column 4, beginning at line 16, "the **router of ingress node** 20...**replaces** in the frame the **previous TOS bits** (generally zero bits) **by the value determined in** the **configuration table** 54" of the ingress node, as shown at Fig. 7.

Thus, <u>Benayoun</u> fails to cure the deficiencies of <u>Winther</u> and, like <u>Winther</u>, fails to teach or suggest a <u>**router**</u> comprising "a **bit-setting information-obtaining unit configured <u>to obtain</u>** first bits and **second bits <u>from a QoS controller</u>**...**said second bits** that **indicate a path for routing the IP packet to a destination router**," as recited by amended Claim 6.

For completeness, Applicants also discuss the impropriety of the asserted combination of Winther and Benayoun, even though the combination, even if proper, fails to teach every element of the claim and, thereby, fails to establish a *prima facie* case of obviousness.

Winther describes, at paragraph [0059], that the type of service (TOS) field 140 "is used to denote how wireless MAN 20…should make tradeoffs between throughput, delay, reliability, and cost." The outstanding Office proposes to modify the TOS field 140 of Winther with the TOS value set by the ingress node 16 of Benayoun.

However, the TOS value set by the ingress node 16 of Benayoun does not indicate any information regarding tradeoffs but, instead, enables selection of a routing table.

When a combination of references is asserted as teaching every element of a claim, both the asserted modification, or how the references are combined, as well as the asserted motivation for the combination, or why one of ordinary skill in the art would combine the references, must be specified in the rejection. MPEP § 706.02(V) sets out the requirement for asserting the modification. As to the asserted motivation, the Court recently reiterated the requirement of MPEP § 2143.01 by stating that a "patent composed of several elements is not proved obvious merely by demonstrating that each element was, independently, known in the prior art." KSR Int. Co. v. Teleflex Inc., 82 USPQ2d 1385, 1389 (2007). The Court stated the importance of identifying "a reason that would have prompted a person of ordinary skill in the art to combine the elements as the new invention does." *Id*.

Further, under MPEP § 2143.01(V) the **proposed modification cannot render the prior art unsatisfactory for its intended purpose**, and, under MPEP § 2143.01(VI), the proposed modification **cannot change the principle of operation of the prior art**.

In this case, modifying the TOS field 140 of Winther with the TOS value set by the ingress node of Benayoun violates MPEP § 2143.01.

Because the combination of <u>Winther</u> and <u>Benayoun</u> fails to teach or suggest at least

the above-discussed features of amended Claim 6, Applicants respectfully request that the

rejection of Claim 6 under 35 U.S.C. § 103(a) be withdrawn.

Response to Rejection of Claims 1 and 5

Claims 1 and 5, though differing in scope and statutory class from Claim 6, patentably

define over <u>Winther</u> and <u>Benayoun</u> for similar reasons as those discussed with regard to

Claim 6.

Amended Claim 1 recites a "**QoS controller**, in an IP network having one or more

routers, the QoS controller being **different from the one or more routers of the IP network**

and **comprising**: a **storing unit configured to** assign a first bit area and a second bit area

within a field in an IP header of an IP packet, and **store first bits** for implementing

bandwidth control at said routers into said first bit area **and second bits** that indicate a path

for routing the IP packet to a destination router into said second bit area, wherein said first

bits and said second bits do not interfere with each other within the field in the IP header; **and**

a **reporting unit configured to report to said routers said first bits and said second bits**

stored by said storing unit."

As discussed above, the router 108 of <u>Winther</u> sets the type of service octet 134, and

the router of the ingress node of <u>Benayoun</u> replaces the TOS bits received in a service type

field. Thus, neither <u>Benayoun</u> nor <u>Winther</u> teaches or suggests a "QoS

controller...configured to...store first bits...and second bits," as defined by amended Claim

1.

Amended Claim 5 recites a "method of controlling QoS in an IP network having one

or more routers, comprising the steps of: **assigning, by a QoS controller** that is different

from the one or more routers of the IP network, within a field in an IP header of an IP packet,

9

a first bit area and a second bit area, wherein said first bit area and said second bit area do not interfere with each other within the field in the IP header ; **storing first bits** for implementing bandwidth control at said routers into said first bit area, **and storing second bits** that indicate a path for routing the IP packet to a destination router at said routers into said second bit area; **reporting to said routers said first bits and said second bits stored**; and causing, according to said reporting, said routers to start controlling and routing at said routers based on said reported first bits and said reported second bits stored."

As discussed above, neither <u>Winther</u> nor <u>Benayoun</u> teaches or suggests "**assigning, by a QoS controller** that is different from the one or more routers of the IP network, within a field in an IP header of an IP packet, **a first bit area and a second bit area**...**storing first bits** for implementing bandwidth control at said routers into said first bit area, **and storing second bits** that indicate a path for routing the IP packet to a destination router at said routers into said second bit area; **reporting to said routers said first bits and said second bits stored**." Instead, <u>Winther</u> describes a router 108 setting the type of service octet 134, and <u>Benayoun</u> describes the router of the ingress node replacing the TOS bits received in a service type field.

Further, <u>Beshai</u>, which is additionally asserted against Claims 1 and 5, fails to cure the above-discussed deficiencies of <u>Winther</u> and <u>Benayoun</u> with regard to Claims 1, 5, and 6 and is not asserted to teach the features of Claims 1, 5, and 6 that are discussed as deficient in <u>Winther</u> and <u>Benayoun</u>.

<u>Response to Rejection of Claims 2-4, 7, and 8</u>

Claims 2-4 depend from Claim 1, and Claims 7 and 8 depend from Claim 6. Thus, Claims 2-4 patentably define over <u>Winther</u>, <u>Benayoun</u>, and <u>Beshai</u> for at least the same

reasons as Claim 1, and Claims 7 and 8 patentably define over Winther and Benayoun for at least the same reasons as Claim 6.

Beshai, which is additionally asserted against Claims 7 and 8, fails to cure the deficiencies of Winther and Benayoun with regard to Claim 6 and is not asserted to teach the features of Claim 6 that are deficient in the combination of Winther and Benayoun.

Colley, which is additionally asserted against Claim 2, fails to cure the deficiencies discussed for Winther, Benayoun, and Beshai with regard to Claim 1 and is not asserted to teach the features discussed as deficient in Winther, Benayoun, and Beshai.

Further, Claims 2-4, 7, and 8 define additional features that are also not taught or suggested by the asserted combination of references.

For example, Claim 4 recites "a traffic-monitoring unit configured to monitor traffic conditions at said routers; and a corresponding-relationship updating unit configured to **change the relationship**, stored at said database unit, **between said router-control class and said routing class, based on said monitored traffic conditions**, wherein said reporting unit reports to said routers the relationship changed by said corresponding-relationship updating unit."

The outstanding Office Action asserts, at page 7, that Wither teaches an updating unit "configured to change the relationship...between said router-control class and said routing class, based on said monitored traffic conditions," as recited by Claim 4, at paragraph [0065].

However, the discussion of varying levels of service for different subscriber nodes 26 of Winther, at paragraph [0065], says nothing about updating the relationship between router-control class and routing class. Further, when Winther is conceded not to teach monitoring of traffic conditions, and Beshai, which is asserted to teach the traffic-monitoring unit, as recited by Claim 4, is not asserted to teach the updating, the combination of references cannot teach updating "based on said monitored traffic conditions," as recited by Claim 4.

11

Thus, Applicants respectfully request that the rejections under 35 U.S.C. § 103(a) of Claims 2-4, 7, and 8 be withdrawn.

Remarks Regarding New Claims

New Claim 9 further defines the database unit and recites "said database unit stores a first relationship between said router-control class and said routing class for controlling a first one of said routers and stores a second relationship between said router-control class and said routing class for controlling a second one of said routers."

The discussion of varying levels of service for each subscriber node 26 does not teach the above-quoted features of new Claim 9, because varying levels of service correspond with additional router-control classes rather than differing relationships among an existing router-control class and routing class.

New Claims 10 and 11 are submitted as being patentable for similar reasons as those discussed with regard to Claim 4.
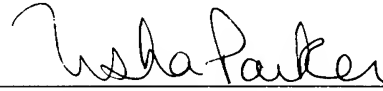
Conclusion

Accordingly, the outstanding rejections are traversed and the pending claims are believed to be in condition for formal allowance. An early and favorable action to that effect is, therefore, respectfully requested.

Further, if any of the rejections in the outstanding Office Action are maintained in full

or in part, Applicants request a specific rebuttal of the related arguments presented herein.

Respectfully submitted,

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13